Application No. 10/534,411
Amendment dated December 8, 2006

Reply to Office Action of September 8, 2006

AMENDMENTS TO THE CLAIMS

1. (Withdrawn) A method for producing a porous film, comprising the steps of casting a

polymer solution comprising a polymer onto a substrate to form a film; and subjecting the film to

phase conversion to thereby form a porous film, wherein the polymer constituting the porous

film has a surface tension Sa [mN/m], wherein the substrate has a surface tension Sb [mN/m],

and wherein Sa and Sb satisfy the following condition: Sa-Sb≥-10.

2. (Withdrawn) The method for producing a porous film according to claim 1, further

comprising the steps of casting a solution mixture as the polymer solution onto the substrate to

form a film, and subjecting the film to phase conversion by bringing the film to a solidifying

liquid to thereby form a porous film, the solution mixture comprising 8 to 25 percent by weight

of a polymer component for constituting the porous film, 10 to 50 percent by weight of a water-

soluble polymer, 0 to 10 percent by weight of water and 30 to 82 percent by weight of a water-

soluble polar solvent.

3. (Withdrawn) The method for producing a porous film according to one of claims 1

and 2, further comprising the steps of holding the cast film in an atmosphere at a relative

humidity of 70% to 100% and a temperature of 15°C to 90°C for 0.2 to 15 minutes, and bringing

the film to a solidifying liquid comprising a nonsolvent for the polymer component.

4. (Currently amended) A porous film having a large number of continuous micropores,

wherein the film has a thickness of 5 to 200 μm, has an average surface pore size A of 0.01 to 10

μm and an average rate of surface hole area C and has an average inside pore size B and an

average rate of inside hole area D, wherein the ratio A/B of A to B is in the range of 0.3 to 3, and

wherein the ratio C/D of C to D is in the range of 0.7 to 1.5, and wherein a polymer component

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forming the film comprises at least one selected from a group of amide-imide polymers, imide polymers, polyethersulfones, polysulfones, acrylic polymers or cellulose acetate.

5. (Currently amended) A porous film having a large number of continuous micropores, wherein the film has a thickness of 5 to 200 μm, has an average pore size A¹ of 0.01 to 10 μm at one surface, an average pore size A² of 0.01 to 10 μm at the other surface, an average rate of hole area C¹ of 48% or more at one surface, and an average rate of hole area C² of 48% or more at the other surface, wherein the ratio A¹/A² of A¹ to A² is in the range of 0.3 to 3, and wherein the ratio C¹/C² of C¹ to C² is in the range of 0.7 to 1.5, and wherein a polymer component forming the film comprises at least one selected from a group of amide-imide polymers, imide polymers, polyethersulfones, polysulfones, acrylic polymers or cellulose acetate.